

IN THE CLAIMS:

1. (currently amended) A target assembly for a laser alignment system, the target assembly comprising three light-sensitive target cells fixedly mounted to a support plate in proximity to one another to define corners of a triangle, the light-sensitive target cells all facing in a common direction, each said target cell having first and second perpendicular axes, the first axes of said target cells being mutually parallel to one another, the second axes of the target cells being coplanar and substantially parallel to the support plate, said target assembly having a ball mount for mounting the target assembly to a sheave such that the support plate and the second axes of the respective light-sensitive target cells are aligned substantially perpendicular to a rotational axis of the sheave, and wherein said ball mount includes a plurality of balls arranged in an L-shaped pattern to engage a plurality of grooves of said sheave.

2. (canceled).

3. (canceled).

4. (canceled).

5. (canceled).

6. (canceled).

7. (currently amended) The target assembly of claim 6 1 , wherein at least one said ball of the plurality of balls is adjustable to properly engage said grooves of said sheave.

8. (currently amended) A target assembly as in claim 3 1, further comprising a target pole, said support plate being mounted to an end of the target pole such that the support plate and the second axes of the respective light-sensitive target cells are substantially perpendicular to the target pole.

9. (currently amended) A sheave laser alignment system, said system aligns a rotational axis of a first sheave to a parallel rotational axis of a second sheave, said system comprising:

a laser module operative to sweep a reference plane, said laser module mounted to a groove on said first sheave; and

a target assembly mounted to a groove on said second sheave, said target assembly having three light-sensitive target cells fixedly mounted to a support plate in proximity to one another to define corners of a triangle, the light-sensitive target cells all facing in a common direction,

each said target cell having first and second perpendicular axes, the first axes of said target cells being mutually parallel to one another, the second axes of the target cells being coplanar and substantially parallel to the support plate; and

a ball mount for mounting the target assembly to said sheave such that the support plate and the second axes of the respective light-sensitive target cells are aligned substantially perpendicular to said rotational axis of the sheave, said ball mount including a plurality of balls arranged in an L-shaped pattern to engage a plurality of grooves on said sheave.

10. (canceled).

11. (canceled).

12. (canceled).

13. (canceled).

14. (canceled).

15. (canceled).

16. (currently amended) The system of claim 45 9, wherein at least one said ball of the plurality of balls is adjustable to properly engage said grooves of said sheave.

17. (currently amended) The system of claim 42 9, further comprising a target pole, said support plate being mounted to an end of the target pole such that the support plate and the second axes of the respective light-sensitive target cells are substantially perpendicular to the target pole.

18. (currently amended) A method of aligning components of a sheave system, said sheave system includes a first sheave having circumferential grooves, said first sheave mounted to a first rotational axis and a second sheave having circumferential grooves, said second sheave mounted to a second rotational axis, said method comprising:

fixing a laser module to the grooves of said first sheave;

fixing a target assembly to the grooves of said second sheave;

generating a reference plane by said laser module;

measuring alignment data received from said target assembly;

calculating correction data based on the measured alignment data; and

adjusting said first and second sheave until said correction data is within an acceptable range, wherein the step of fixing a target assembly to the grooves of said second sheave includes providing three light-sensitive target cells fixedly mounted in said target assembly, said cells mounted in proximity to one another to define corners of a triangle, the cells all facing in a common direction, said target assembly arranged such that two said cells lie in the same perpendicular plane to the generating direction of the reference plane and are positioned further away from said laser module than a first cell, and wherein the step of calculating correction data includes calculating a pitch error by comparing the measuring alignment data of the two furthest said cells of said target assembly.

19. (canceled).

20. (canceled).

21. (currently amended) A method as in claim 20 18, wherein the step of calculating correction data includes calculating a displacement error of the grooves by averaging the measuring alignment data of the two furthest said cells of said target assembly.

22. (original) A method as in claim 21, wherein the step of calculating the correction data includes calculating a yaw error by finding the difference between the measuring alignment data of said first cell closest to said laser module and said displacement error of the grooves.